

## ABSTRACT

A process for fixed bed sweetening of petroleum distillates using halogenating metal phthalocyanine as a catalyst comprising impregnating the catalyst on activated charcoal bed by circulating alcoholic alkaline solution of the catalyst through charcoal bed till colourless bed solution is obtained in the effluent, passing the petroleum distillate through the said catalyst loaded charcoal bed along with air or oxygen at a temperature and pressure with liquid hourly space velocity with continuous or intermittent injection of alkali solution such as sodium hydroxide of concentration to obtain the desired low mercaptan level petroleum distillates. The alkaline solution used is selected from methanolic and ethanolic solution of sodium hydroxide. The halogenated metal phthalocyanine catalyst used is selected from dichloro cobalt phthalocyanine and dibromo cobalt phthalocyanine. The petroleum fraction used is selected from diesel, kerosene and FCC gasoline.